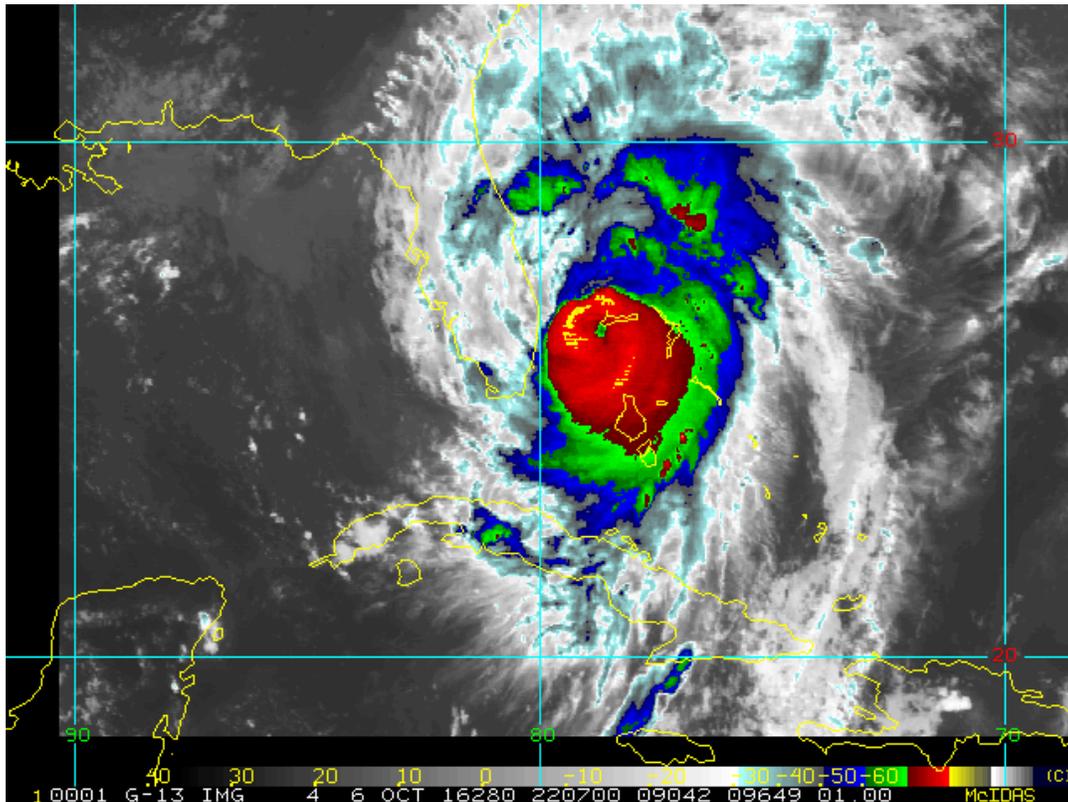




MIAMI-SOUTH FLORIDA
National Weather Service
Forecast Office
<http://www.weather.gov/miami>



Hurricane Matthew near the Florida East coast on October 6th, 2016

2017 Severe Weather Awareness Week

Thursday, January 26th is Hurricane and Flooding Awareness Day

After a decade with no serious hurricane threats, 2016 proved to be the year South Florida was seriously tested by a threat from a major hurricane. Hurricane Matthew passed very close to Southeast Florida on October 6th as a Category 3 hurricane. The eye of Matthew passed as close as 65 miles east of West Palm Beach. Fortunately for South Florida, this kept the hurricane force winds and major impacts just offshore. Nevertheless, South Florida had to prepare for the possibility of a major hurricane as hurricane and tropical storm warnings were issued for this close-call event.

Matthew was a sobering reminder that despite our relative good luck the past 10+ years, South Florida remains one of the most vulnerable and hurricane-prone places in

the country. On average, the center of a hurricane has passed within 50 miles of any point in South Florida about every 6 to 8 years. This means that while hurricane strikes are not a yearly occurrence, statistics indicate that close calls such as Hurricane Matthew can occur a few times a decade, with direct strikes at least once a decade. Indirect hurricane impacts as well as tropical storms passing over south Florida occur with higher frequency; at least every 2 or 3 years on average.

Therefore, we can't afford to become complacent. Be prepared **every year** for the possibility of a tropical storm or hurricane impacting our region.

Close calls such as Matthew still cause impacts, such as damaging tropical storm force winds, rainfall flooding, tornadoes and significant beach erosion. In 2013, the center of Tropical Storm Andrea passed well to our north, but the tail end of its associated cloud band impacted South Florida with tornadoes, torrential and severe flooding. Do not focus too much on the center of a tropical storm or hurricane, but on its potentially far-reaching impacts.

IT'S NOT JUST ABOUT THE WIND

Tropical cyclones are multi-hazard weather systems. While the wind speed is what determines the classification of a tropical cyclone, other hazards such as storm surge, flooding and tornadoes can cause significant impacts, including loss of life. Tropical Storm Isaac in 2012 was a heavy rain and flood producer on both the Gulf and Atlantic coasts of South Florida. Tropical Storms Debby in 2012 and Andrea in 2013 spawned several tornadoes area-wide and Hurricane Sandy's near-miss in 2012 was still close enough to cause coastal flooding and beach erosion in the millions of dollars in total damage. Hurricane Matthew led to almost \$20 million in beach erosion damage in Palm Beach County alone.

Remember: It doesn't take a major hurricane to produce significant impacts. Tropical storms directly impacting south Florida have been known to produce severe flooding, damaging winds and tornadoes. Take every tropical cyclone seriously, whether it's a tropical storm or a major hurricane.

Important: Historically, it is the water that causes most of the deaths in hurricanes. About 90 percent of all hurricane-related deaths nationwide occur from drowning from either the storm surge or freshwater flooding. As Debby and Isaac illustrated, the threat from storm surge is particularly high along South Florida's coasts, and residents of coastal areas are urged to heed advice from local officials and evacuate whenever storm surge flooding is expected. Become familiar with your county's storm surge evacuation

zones and know whether you live in one or not. **Visit your county's emergency management web site for more information on evacuation zones.**

HURRICANE SAFETY TIPS: regardless of the short or long term hurricane outlook, South Floridians need to be prepared every year. It only takes one big storm to affect our area in an otherwise quiet season for long lasting impacts to be felt. Now is the time to begin preparing for the 2017 hurricane season. Develop a plan and have it in place before a storm threatens. Know if you live in a hurricane evacuation zone. Gather supplies such as bottled water, canned foods and batteries. Remember to buy enough provisions to last a minimum of three to five days in the event of a tropical system affecting our area. Buy and install hurricane shutters. A minimum of preparation can save lives and property.

People are also urged to be extremely cautious during the storm's aftermath. Typically, more people die after the passage of a storm than during the storm itself. After Hurricane Wilma in 2005, 30 people died after the storm's passage from a combination of factors including carbon monoxide poisoning, injuries while removing debris and vehicle accidents. Extreme care must be used when using generators, and make sure to run them in an outdoor location, not inside the house.

For a comprehensive list of hurricane preparedness information, visit ready.gov and [Ready South Florida](#).

Flooding

South Florida's occasional torrential rains and flat terrain can lead to major flooding. While tropical weather systems produce most of the significant and widespread rain events, flooding also occurs from non-tropical weather systems. These torrential rainfall events occur at least two or three times a year, and in some years even more. In 2016, there were 5 documented rainfall flooding events, with one of these resulting in significant impacts including road closures and water entering structures (southern Palm Beach County on March 24th).

Another type of flooding, tidal flooding due to astronomical high tide (king tides), took place in mid-October and again in mid-November along and near the Intracoastal Waterway in Southeast Florida from south of Downtown Miami all the way to West Palm Beach. Reports of street flooding were received from 28 locations.

Storm surge from Hurricane Hermine in the northeastern Gulf of Mexico caused minor flooding in the Goodland and Everglades City areas of Collier County.

A rare event called a “meteotsunami” affected Naples and Marco Island early in the morning of January 17th, 2016. This is an increase in ocean levels from a weather system such as a squall line or line of strong thunderstorms which moved onshore and led to brief flooding of coastal areas.



Flooding in Delray Beach on January 10, 2014 (Courtesy Kenneth Kraus)

PREPARE FOR FLOODING: The flat South Florida terrain lends itself to ponding of water in poorly drained or low lying areas during heavy rain events, rather than the flash flooding that occurs in other parts of the country. While this type of flooding is normally not as deadly or destructive, it can still lead to significant impacts as water can enter homes and other structures, as well as make driving extremely hazardous due to flooded roadways which can sometimes obscure canals. If water is covering a roadway, do not assume that you can drive through it. **Turn around, don't drown!!**

All South Floridians need to be aware of their particular neighborhood's vulnerability to flooding. Fortunately, people can also plan well in advance for floods. The best advice is to have flood insurance, a separate policy from your homeowners insurance. Know if you live in an area which floods frequently from heavy rains. Good flood safety information can be found at the [NWS Flood Safety web site](#).

Monitor NOAA Weather Radio before, during and after a tropical cyclone or flood event to stay abreast of the latest information. You can also visit the National Weather Service Miami Forecast Office web site at weather.gov/southflorida where a description of potential storm impacts and latest hurricane and flood watches and warnings will be available, as well as the National Hurricane Center's five-day tropical cyclone track and intensity forecast.